UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,756	02/10/2000	Wolfgang G. Eibach	UK999054	4338

25259 7590 09/08/2006	EXAMINER
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ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="3">Office Action Summary
for Applications
Under Accelerated Examination</td><td>Application No.</td><td>Applicant(s)</td><td></td></tr>
<tr><td>09/501,756</td><td>EIBACH ET AL.</td><td></td></tr>
<tr><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Peter Poltorak</td><td>2134</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Since this application has been granted special status under the accelerated examination program,

NO extensions of time under 37 CFR 1.136(a) will be permitted and a SHORTENED STATUTORY PERIOD FOR

REPLY IS SET TO EXPIRE:

ONE MONTH OR THIRTY (30) DAYS, WHICHEVER IS LONGER,
FROM THE MAILING DATE OF THIS COMMUNICATION – if this is a non-final action or a *Quayle* action.
(Examiner: For **FINAL** actions, please use PTOL-326.)

The objective of the accelerated examination program is to complete the examination of an application within twelve months from the filing date of the application. Any reply must be filed electronically via EFS-Web so that the papers will be expeditiously processed and considered. If the reply is not filed electronically via EFS-Web, the final disposition of the application may occur later than twelve months from the filing of the application.

Status

1)☒ Responsive to communication(s) filed on <u>28 June 2006</u>.

2)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

3)☒ Claim(s) <u>1-5 and 7-11</u> is/are pending in the application.

    3a) Of the above claim(s) _____ is/are withdrawn from consideration.

4)☐ Claim(s) _____ is/are allowed.

5)☒ Claim(s) <u>1-5,7-8,10 and 11</u> is/are rejected.

6)☐ Claim(s) _____ is/are objected to.

7)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

8)☐ The specification is objected to by the Examiner.

9)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

10)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

11)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. The Amendment, and remarks therein, received on 6/28/06 have been entered and

   carefully considered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be

   found in a prior office action.

Response to Arguments

3. Applicant arguments and amendments to the claim language and the specification

   overcame the previous 35 USC § 112 rejections and objections to drawings. Thus

   the 35 USC § 112 rejection and objections to drawings are withdrawn.

4. In various places of applicant's Remarks applicant argues the examiner's position

   without providing concrete facts. For example, as per claim 2, applicant disputes the

   fact that the limitation of claim 2 (discarding non-permitted operation requests) is

   well known, and rather than providing examples to that the limitations are not well

   known, applicant rests on the assumption that the examiner provided only a

   subjective opinion.

   Taking in consideration the amount of issues raised by applicant that essentially

   raised a request for explanation of the art of record and its relation to the claimed

   limitations, the examiner addresses applicant's arguments by grouping them

   together.

   Also, in the future, applicant should provide clear indication of the deficiencies of the

   art of record backed up with "extrinsic evidence", "facts and/or technical reasoning".

Otherwise, statements indicating that it is not well known to discard non-permitted

operation requests for example, are diminished to meaningless discussion.   The

facts and examples of the opposite trends in the art at the time of the invention (e.g.

providing proofs that gateways limiting passing of the operation request to only a

predefined set of permitted operations in fact do execute the non-permitted

operation requests) would be more persuasive. No evidence support applicant's

assertions was provided. As a result the arguments form mere opinions

unsubstantiated by facts.

Lastly, the examiner reminds applicant that while judging obviousness the

knowledge which was within the level of ordinary skill at the time the claimed

invention was made, must be taken into the account. The examiner, also reminds

applicant that in orders to adequately traverse the examiner's statement of well-

known facts, an applicant must specifically point out the supposed errors in the

examiner's action, which would include stating why the noticed fact is not considered

to be common knowledge or well-known in the art. See 37 CFR 1.111(b).

5. As per claim 1 the examiner Nathanson discloses a system 10 incorporated in a

   vehicle (Fig. 1, col. 2 lines 31-33) comprising a first data processing unit (15)

   connected to device control units of the vehicle (Fig. 1 and col. 2 lines 31-38 and col.

   4 lines 28-33), a second data processing unit (25) connected to communications

   apparatus providing a wireless connection (35) to an external network (e.g. Internet,

   Fig. 1 and col. 3 lines 20-22 and col. 4 lines 4-16), such that operation requests can

   be received at the second data processing unit from the external network (Fig. 1, col.

3 lines 20-22 and col. 4 lines 4-16), and a data communications link between the first

and second data processing units (Fig. 1 and col. 2 lines 19-21).

The previous Office Action contained a typographical error, wherein the element 60

(Nathanson, Fig. 1) was shown to identify a second data processing unit 60, but

actually element 25 discloses the presence of the second data processing. The

typographical error has been corrected in this Office Action.

Nathanson's disclosure clearly indicates the presence of the second data processing

unit by disclosing element 25 that bridges external clients with a device control unit.

In particular, Nathanson clearly discloses processing elements of element 25 (e.g.

col. 3 lines 4-6) and communication elements (e.g. Fig. 1 elements 40 and 50 as

further articulated in col. 2 lines 23-28). As a result, the apparatus disclosed by

Nathanson is representative of any other typical computer, e.g. PC, where in

addition to a communication apparatus (the network interfaces such as network

cards in PCs for example, or in Nathanson's case: elements 40 and 50) a second

processing unit (such as an Operating System or a program module) for purpose of

interpretation and processing of the received data is used.

The examiner also points out that the current claim language does not preclude "the

server 25" and "the client 30" to be broadly interpreted as "the second data

processing unit (B)" and "a communications apparatus" respectively.

6. Furthermore, Richardson was cited as obvious in view of Nathanson's. Richardson

   teaches a gateway (enabler) limiting the operations that can be performed at the first

   data processing unit in response to requests from the second processing unit to only

a predefined set of permitted operations (col. 5 lines 49-59). The benefit of increased

security that would have resulted from implementing Richardson's invention into

Nathanson's invention would not only be clear to one of ordinary skill in the art at the

time of applicant's invention but also Richardson explicitly discloses the security

improvement as the aim of the invention (e.g. col. 4 lines 52-53). As a result,

applicant's argument that the motivation to combine could be found only in

applicant's specification is erroneous.

7. As per claim 2 the examiner points out that although Richardson does not explicitly

disclose discarding non-permitted operation requests, discarding non-permitted

operation requests by the gateway that controls requests and limits passing of the

requests to only a predefined set of permitted operations, if not inherent, would be at

least implicit. Any opposite action (allowing the non-permitted operation) could

threaten stability of the system. Even if the instructions were to be saved, in addition

to slowing down the system by virtue of necessity of additional

instructions/operations, the threat of future accidental execution would be

introduced.

8. As per claim 4, the examiner pointed out that although Nathanson in view of

Richardson teach the gateway component limiting passing of the operation requests

the art of record failed to disclose access control list defining which operation

requests are permitted for particular requestors. However, the examiner also

pointed out that access control list as cited in the claim language is well known in the

art. Applicant questions the fact that access control lists are well known in the art

but once again fails to provide any concrete facts to the contrary. Applicant's

argument is not understood. "Comparing all operation requests with operations

permitted for particular requestors" is a fundamental concept of computer security

implemented in various other technologies that are not only well known but also

widely implemented, e.g. Windows NT, Citrix, Oracle, etc. For example, the

controlling access to object using control lists can be found in any Windows NT book

in the chapter addressing authentication, rights and permissions. Implementation of

Windows NT in the Internet environment (Internet Information Server) will also

provide applicant with examples of Windows NT authentication and permissions of

external requests. Furthermore, examining Internet e-mail as well as Internet trade

(shopping) also incorporates requests/user authentication/validation that inherently

comprises permission (access/no access) lists.

9. As per claim 3 Nathanson in view of Richardson's and further in view of Serughett's

invention disclose an operating system implemented in the vehicle. Serughett's

discloses a gateway component running in the static operating system environment.

Once again, applicant objects to Serughet as allegedly not disclosing "any language

that teaches the limitations" and not providing a prima facie case of obviousness.

Applicant's position is not understood, especially since applicant's criticisms is not

backed up with functional examples. Serughett teaches the OSEK/VDX that is a

static operating system and is implemented in vehicles (see the title and Fig. 1 for

example) and provides the benefits the benefits of case of a prima facie case of

obviousness (see benefits of OSEK cited on pg. 26 for example).

Also, as per applicant's questioning the motivation to implement the static operating

system environment in a gateway component of the first data processing unit, the

examiner once again, points to the benefit of the OSEK static operating system

disclosed by Serughett cited above and in the previous Office action.

10. Claim 5 limitations were covered while discussing the previous claims and the

examiner pointed out that some of these limitations were well known in the art. The

main limitations of claim 5 were directed towards Real Time Operating System and

authentication of operation requests against access control list operations, wherein

only permitted operations were passed and non-permitted discarded. These

limitations were addressed when discussing claims 2 and 3. Given the fact that the

same reference addresses claim 5 as claims 2 and 3, for the purpose of the rejection

the examiner treated claim 5 as equivalent.

11. In particular, in the discussion of claim 3 the examiner used Serughett's reference

that discussed OSEK, that is a Real Time Operating System (e.g. the last few lines

of pg. 25) and the evaluating of operations requests that resulted in passing or

discarding of requests was addressed with regard to claim 2. Thus, the art and the

examiner's arguments addressing the limitations of claims 2 and 3 sufficiently

covered the limitations of claim 5. Thus, applicant's arguments regarding claim 5

were found non persuasive.

12. As per the rejections of claims 7 and 8 under 35 U.S.C. 103(a), applicant failed to

identify "one or more security-critical resources" in the examiner's cited elements 70-

78. Applicant argues that these elements are not security-critical resources because

they are appliance interface modules and also requests evidence for applicant's

provided conclusion that "an interface module, as taught in Basset, inherently

teaches a data processing system".

In the previous Office Action, the examiner provided only a few examples of one or

more security critical resources taught by Basset. The examiner invites applicant to

careful reading of the Basset's reference in order to fully appreciate the art and

relationship with applicant's claim language. For example, in addition to the citation

of Basset in the previous Office Action, Basset discloses a security-critical resource

such as a "furnace" that is controlled by a first data processing unit (an appliance

interface module 70. Basset, Abstract, col. 5 lines 58-67).

Applicant also argues Basset's disclosure of a second processing unit arguing the

link between the first and the second unit within a network-connected home

environment, and points to col. 5 lines 25-27 that, according to applicant, is a proof

of Basset's disclosure not reading on the claim language.

It appears that applicant failed short on fully appreciating the cited disclosure. In the

attempt to help applicant place the cited lines in the appropriate context the

examiner provides applicant with the full paragraph: "An automation system

controller 15 may be provided, which is connected, for example, to the residence

electrical wiring system 20. Automation system controller 15 may be configured to

include, for example, an Energy Management System (EMS) network controller

which can serve as scheduler, user interface, load research information storage and

display service for all AIM modules in a home installation". Furthermore, the

examiner points out that cited reference was just an example and invites applicant to consider the whole Basset's reference, which provides a plurality of element 15 functionalities.

As per applicant's arguments that Richardson does not suggest "the gateway component limitation the operations which can be performed at the first data processing unit to only a predefined set of permitted operations", the examiner points out that Richardson, col. 5 lines 49-59, clearly disclose an enabler limiting the operation requests that reads on the gateway recited in the claim limitations.

13. As per claim 8 applicant challenges the examiner's argument that one would have been motivated to utilize Internet in Basset and Richardson's invention especially in light of the benefit of Internet as evidence by Internet commercial success, but once again applicant not only failed to recognize the well known benefits of the Internet connection (e.g. flexible access and data delivery path) but also to provide any examples to the contrary.

14. Claim 7 and 8 were also rejected over Basset in view of Pfleeger.

Applicant seems to repeat previously stated position and additionally argues Pfleeger's reference as well and motivation to combine.

Applicant's carefully considered arguments were not found persuasive. The examiner points applicant to previous discussion in this Office Action (above) as well as the previous Office Action, paragraphs 15-16.

15. Claims 1-5, 7-8 and 10-11 have been examined.

Claim Rejections - 35 USC § 103

16. Claims 1-2, 4 and 10-11 remain rejected under 35 U.S.C. 103(a) as being

unpatentable over Nathanson (U.S. Patent No 6263268) in view of Richardson (U.S.

Patent No 6427202).

Nathanson teaches a system 10 incorporated in a vehicle (Fig. 1, col. 2 lines 31-33).

17. As per claims 1 and 10 Nathanson discloses a first data processing unit (15)

connected to device control units of the vehicle (Fig. 1 and col. 2 lines 31-38 and col.

4 lines 28-33), a second data processing unit (25) connected to communications

apparatus providing a wireless connection (35) to an external network (e.g. Internet,

Fig. 1 and col. 3 lines 20-22 and col. 4 lines 4-16), such that operation requests can

be received at the second data processing unit from the external network (Fig. 1, col.

3 lines 20-22 and col. 4 lines 4-16), a data communications link between the first and

second data processing units (Fig. 1 and col. 2 lines 19-21).

Nathanson teach communication across the data communication link (col. 3 lines 1-

16) but do not teach a gateway component for controlling communications across

the data communications link, the gateway component limiting passing of the

operation requests from the second data processing unit to the vehicle's device

control units to only a predefined set of permitted operations.

Richardson teaches a gateway limiting the operations which can be performed at the

first data processing unit in response to requests from the second processing unit to

only a predefined set of permitted operation (col. 5 lines 49-59).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation given the benefit of increased security.

18. As per claim 11 the secure resources include the vehicle's internal device control units (col. 2 lines 34-36).

19. As per claim 2 Nathanson in view of Richardson do not explicitly teach discarding non-permitted operation requests. However, any data (including operation requests) require (tight up) computing resources and as a result discarding non-permitted operation requests would have been obvious modification given the benefit of saving unnecessary use of resources.

20. As per claim 4 Nathanson in view of Richardson teach the second data processing unit and the gateway component limiting passing of the operation requests from the second data processing unit to the vehicle's device control units to only a predefined set of permitted operations as discussed above.

Nathanson in view of Richardson does not teach a gateway component in the second data processing unit that compares all operation requests on the first data processing unit and one or more access control list (ACL) in the second data processing unit defining which operation requests are permitted for particular requestors.

Official Notice is taken that it is old and well-known practice to use ACLs to define which operation requests are permitted for particular requestor and that

implementation of ACL requires a component comparing the requests with the ACL's entries. Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate ACL defining which operation requests are permitted for particular requestors and a gateway component that compares all operation requests given the benefit of selective access control to the secure resources.

21. Claims 3 and 5 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson (U.S. Patent No 6263268) in view of Richardson (U.S. Patent No 6427202) and in further view of Serughett (Marc Serughett, "OSEK: a super-small kernel for deeply embedded applications?", 1999).

Nathanson in view of Richardson teach the first data processing unit the gateway component implemented in a vehicle as discussed above.

Nathanson in view of Richardson is silent in regard to the operating system implemented in the vehicle and as a result there is not disclosure of the first data processing unit and the gateway component running in the static operating system environment.

In its publication Serughett teaches the OSEK/VDX static operating system and discloses various benefits of OSEK.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to run the first data processing unit and the gateway component running the static operating system as taught by Serughett given the various benefit

disclosed by Serughett: reliability, minimal resource usage, highly efficient scheduling, etc.

22. As per claim 5 OSKE/VDX taught by Serughett is a RTOS and other limitations of claim 5 are substantially equivalent to the limitations of claim 2-3; therefore these limitations are similarly rejected.

23. Claims 7-8 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bassett (U.S. Patent No 5706191) in view of Richardson (U.S. Patent No 6427202). Bassett teach a first data processing unit (an appliance interface module, AIMs, 70-78) connected to one or more security critical resources (water heater 71, gas meter 50, etc.) and a second processing unit (controller 15, Fig. 1) connected to an external communications network (Fig. 6, col. 12 lines 41-57) such that operation request can be received from the external network (col. 12 lines 41-57) a data communication link between the first and second data processing units (wiring system 20, Fig. 1, col. 5 lines 25-27), wherein the first and second data processing units and the link between them are implemented within a network-connected home environment (Fig. 1), and the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit (Fig. 15, col. 9 lines 29-34 and line 51-67). Bassett does not explicitly name a gateway component for controlling communications across the link but (see, col. 14 lines 25-31) it is clear that some kind of gateway component (e.g. a processor) is present in Bassett' invention in

order to enable communication between the external network and the first data processing unit.

Bassett does not teach the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation.

Richardson teaches a gateway limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation (col. 5 lines 49-59).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation given the benefit of increased security.

24. As per claim 8 Bassett in view of Richardson do not teach that the external network is the Internet. However, utilizing Internet as an external network is an obvious variation that is well known in the art. One would have been motivated to use them especially in light of the benefits of Internet as evidenced by Internet commercial success.

25. Claims 7-8 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bassett (U.S. Patent No 5706191) in view of Pfleeger (Charles P. Pfleeger, "Security in computing", 2nd edition, 1996, ISBN: 0133374866).

Bassett teach a first data processing unit (an appliance interface module, AIMs, 70-78) connected to one or more security critical resources (water heater 71, gas meter

50, etc.) and a second processing unit (controller 15, Fig. 1) connected to an external communications network (Fig. 6, col. 12 lines 41-57) such that operation request can be received from the external network (col. 12 lines 41-57) a data communication link between the first and second data processing units (wiring system 20, Fig. 1, col. 5 lines 25-27), wherein the first and second data processing units and the link between them are implemented within a network-connected home environment (Fig. 1), and the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit (Fig. 15, col. 9 lines 29-34 and line 51-67).

Bassett does not explicitly name a gateway component for controlling communications across the link but (see, col. 14 lines 25-31) it is clear that some kind of gateway component (e.g. a processor) is present in Bassett' invention in order to enable communication between the external network and the first data processing unit.

Bassett does not teach the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation

Pfleeger teaches a gateway (firewall) limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation (pg. 427-434).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement limiting the operations which can be performed at the first

data processing unit in response to requests from the second processing unit to only

a predefined set of permitted operation given the benefit of increased security.

26. As per claim 8 Bassett in view of Pfleeger do not teach that the external network is

the Internet. However, utilizing Internet as an external network is an obvious

variation that is well known in the art. One would have been motivated to use them

especially in light of the benefits of Internet as evidenced by Internet commercial
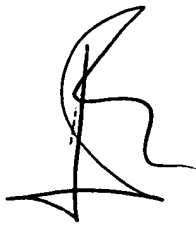
success.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Peter Poltorak whose telephone number is (571) 272-

3840. The examiner can normally be reached Monday through Thursday from 9:00

a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jacques Louis Jacques can be reached on (571) 272-6962. The fax phone

number for the organization where this application or proceeding is assigned is (571)

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

·published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

9/5/06

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